

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electronic circuit ~~having a plurality of unit circuits, the electronic circuit comprising first power source lines, each of the plurality of unit circuits comprising:~~

~~a first transistor coupled in series to an electronic element and coupled to the first power source line; line; and~~

a plurality of unit circuits,

each of the plurality of unit circuits including:

a first transistor that is coupled to an electronic element and that is coupled to the first power source line;

a second transistor that controls an electrical connection between a drain of the first transistor and a gate of the first transistor; and

a third transistor that controls an electrical connection between the first transistor and a current source outputting that outputs a data current that sets an electrical connection a conduction state of the first transistor,

at least for part of the time period in which the third transistor is in an on-state, the first power source line being electrically disconnected from a driving potential, and

at least for part of the time period in which the third transistor is in an off state, a current corresponding to the electrical connection state of the first transistor set by the data current flows between the first power source line and the electronic element.

the first power source line being electrically disconnected from a driving potential during at least a part of a first period in which the third transistor is in an on-state, and

a driving current whose level corresponds to the conduction state of the first transistor set by the data current flowing between the first power source line and the electronic element during at least a part of a second period in which the third transistor is in an off-state.

2. (Currently Amended) An electronic circuit having a plurality of unit circuits, the electronic circuit comprising:

first a first power source lines; line; and

control circuits that control potentials of the first power source lines,

each of the a plurality of unit circuits comprising: circuits,

each of the plurality of unit circuits including:

a first transistor that is coupled in series to an electronic element and that is coupled to the first power source line;

a second transistor that controls an electrical connection between a drain of the first transistor and a gate of the first transistor; and

a third transistor that controls an electrical connection between the first transistor and a current source outputting that outputs a data current that sets an electrical connection-a conduction state of the first transistor,

at least for part of the time period in which the third transistor is in an off state, a current corresponding to the electrical connection state of the first transistor set by the data current flows between the first power source line and the electronic element.

the data current flowing through the first transistor during at least a part of a first period in which the third transistor is in an on-state,

a potential of the first power source line being set to a first voltage during at least a part of the first period,

a driving current whose level corresponds to the conduction state of the first transistor set by the data current flowing between the first power source line and the electronic element during at least a part of a second period in which the third transistor is in an off-state, and

the potential of the first power source line being set to a second voltage that is different from the first voltage during at least a part of the second period.

3. (Currently Amended) An electrical electronic circuit having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a plurality of unit circuits,

each of the plurality of unit circuits including:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal and a fourth terminal, the third terminal being coupled to the first control terminal, the second transistor controlling an electrical coupling between the second terminal and the third terminal; and

a third transistor having a fifth terminal and a sixth terminal, the fifth terminal being coupled to the first terminal,

the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits, line; and

the electronic circuit including a plurality of control circuits, each setting a potential of the first power source line being set to a plurality of potentials or controlling the supply and the disconnection of a driving voltage to the first power source line. an electrical connection between the first power source line and a driving voltage being controlled.

4. (Currently Amended) An electrical electronic circuit having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal and a fourth terminal, the third terminal being coupled to the first control terminal, the second transistor controlling an electrical connection between the second terminal and the third terminal;

a third transistor having a fifth terminal and a sixth terminal, the fifth terminal being coupled to the first terminal; and

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal,

the first terminal being connected to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits, and

the electronic circuit including a plurality of control circuits, each setting the potential of the first power source line to a plurality of potentials or controlling the supply and the disconnection of a driving voltage to the first power source line.

5. (Currently Amended) An electrical electronic circuit having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal and a fourth terminal, the third terminal being coupled to the first control terminal, the second transistor controlling an electrical connection between the second terminal and the third terminal;

a third transistor having a fifth terminal and a sixth terminal, the fifth terminal being coupled to the first terminal; and

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal,

the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits, and

the eighth terminal being coupled to a second power source line, which is held at a predetermined potential, together with the eighth terminals of other unit circuits of the plurality of unit circuits, and

the electronic circuit including a plurality of control circuits, each setting the potential of the first power source line to a plurality of potentials or controlling the supply and the disconnection of a driving voltage to the first power source line.

6. (Previously Presented) The electronic circuit according to Claim 1, transistors included in each of the unit circuits including only the first transistor, the second transistor, and the third transistor.

7. (Previously Presented) The electronic circuit according to Claim 3, an electronic element being coupled to the second terminal.

8. (Previously Presented) The electronic circuit according to Claim 1, the electronic element being a current-driven element.

9. (Previously Presented) The electronic circuit according to Claim 2, each of the control circuits being a fourth transistor having a ninth terminal and a tenth terminal, and

the ninth terminal being coupled to the driving voltage, and the tenth terminal being coupled to the first power source line.

10. (Previously Presented) The method of driving an electronic circuit having a plurality of unit circuits, the electronic circuit including first power source lines, each of the plurality of unit circuits comprising:

a first transistor coupled in series to an electronic element and coupled to the first power source line;

a second transistor that controls an electrical connection between a drain of the first transistor and a gate of the first transistor; and

a third transistor that controls an electrical connection between the first transistor and a current source outputting a data current that sets an electrical connection state of the first transistor,

the method comprising:

a first step of switching the third transistor to an on state to supply the data current to the first transistor to set the electrical connection state of the first transistor; and

a second step of switching the third transistor to an off state and making a current corresponding to the electrical connection state of the first transistor flow between the first power source line and the electronic element,

at least for part of the time period in which in the first step the data current is supplied to the first transistor, the first power source line being electrically disconnected from a driving voltage, and

at least for part of the time period in which the second step is performed, the driving voltage being applied to either the drain of the first transistor or the source of the first transistor through the first power source line.

11. (Previously Presented) A method of driving an electronic circuit having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal and a fourth terminal, the third terminal being coupled to the first control terminal, the fourth terminal being coupled to the second terminal;

a third transistor having a fifth terminal and a sixth terminal, the fifth terminal being coupled to the first terminal; and

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal, the first terminal being coupled to a first power source line together with the first terminals of a series of unit circuits of the plurality of unit circuits,

the method comprising:

a step of electrically disconnecting the first terminals of the series of unit circuits from a driving voltage by electrically coupling the first power source line from the driving voltage, causing a quantity of charge corresponding to the current level of a current flowing through the first transistor to be held in the capacitive element by switching the third transistor of each of the series of unit circuits to an on state, and applying a voltage corresponding to the quantity of charge to the first control terminal to set an electrical connection state between the first terminal and the second terminal; and

a step of switching the third transistor to an off state and electrically connecting the first terminal of each of the series of unit circuits to the driving voltage.

12. (Previously Presented) A method of driving an electronic circuit having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal and a fourth terminal, the third terminal being coupled to the first control terminal, the fourth terminal being coupled to the second terminal;

a third transistor having a fifth terminal and a sixth terminal, the fifth terminal being coupled to the first terminal; and

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal, the first terminal being coupled to a first power source line together with the first terminals of a series of unit circuits of the plurality of unit circuits, and the eighth terminal being coupled to a second power source line together with the eighth terminals of the series of unit circuits of the plurality of unit circuits, the method comprising:

a step of electrically disconnecting the first terminals of the series of unit circuits from a driving voltage by electrically disconnecting the first power source line from the driving voltage, causing a quantity of charge corresponding to the current level of a current flowing through the first transistor to be held in the capacitive element by switching the third transistor of each of the series of unit circuits to an on state, and applying a voltage corresponding to the quantity of charge to the first control terminal to set an electrical connection state between the first terminal and the second terminal; and

a step of switching the third transistor to an off state and electrically connecting the first terminal of each of the series of unit circuits to the driving voltage.

13. (Previously Presented) An electro-optical device, comprising:
- a plurality of scanning lines;
- a plurality of data lines;
- a plurality of first power source lines; and
- a plurality of unit circuits,
- each of the plurality of unit circuits comprising:
- a first transistor coupled in series to an electro-optical element and connected to the corresponding first power source line of the plurality of first power source lines;

a second transistor that controls an electrical connection between a drain of the first transistor and a gate of the first transistor; and

a third transistor that controls an electrical connection between the first transistor and the corresponding data line of the plurality of data lines, the third transistor being controlled by a scanning signal supplied through the corresponding scanning line of the plurality of scanning lines,

at least for part of the time period in which the third transistor is in an on state, the corresponding first power source line being electrically disconnected from a driving voltage, and a data current supplied from the corresponding data line flows through the first transistor to set the electrical connection state of the first transistor, and

at least for part of the time period in which the third transistor is in an off state, the driving voltage being applied to either the drain of the first transistor or the source of the first transistor, and a current corresponding to the electrical connection state of the first transistor set by the data current flows between the corresponding first power source line and the electro-optical element.

14. (Previously Presented) An electro-optical device comprising a plurality of scanning lines, a plurality of data lines, and a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal, a fourth terminal, and a second control terminal, the third terminal being coupled to the first control terminal;

a third transistor having a fifth terminal, a sixth terminal, and a third control terminal, the fifth terminal being coupled to the first terminal, the sixth terminal being

coupled to one data line of the plurality of data lines, the third control terminal being coupled to one scanning line of the plurality of scanning lines;

 a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal; and
 an electro-optical element coupled to the second terminal,
 the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits, and
 the electro-optical device including a plurality of control circuits, each setting the potential of the first power source line to a plurality of potentials or controlling the supply and the disconnection of a driving voltage to the first power source line.

15. (Previously Presented) An electro-optical device, comprising a plurality of scanning lines, a plurality of data lines, and a plurality of unit circuits, each of the plurality of unit circuits comprising:

 a first transistor having a first terminal, a second terminal, and a first control terminal;

 a second transistor having a third terminal, a fourth terminal, and a second control terminal, the third terminal being coupled to the first control terminal, the second transistor controlling an electrical connection between the second terminal and the fourth terminal;

 a third transistor having a fifth terminal, a sixth terminal, and a third control terminal, the fifth terminal being coupled to the first terminal, the sixth terminal being coupled to one data line of the plurality of data lines, the third control terminal being coupled to one scanning line of the plurality of scanning lines; and

 a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal,

the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits, and
the eighth terminal being coupled to a second power source line, which is held at a predetermined potential, together with the eighth terminals of other unit circuits of the plurality of unit circuits, and

the electro-optical device including a plurality of control circuits, each setting a potential of the first power source line to a plurality of potentials or controlling the supply and the disconnection of a driving voltage to the first power source line.

16. (Previously Presented) The electro-optical device according to Claim 13, transistors included in each of the unit circuits having only the first transistor, the second transistor, and the third transistor.

17. (Previously Presented) The electro-optical device according to Claim 14, each of the control circuits being a fourth transistor having a ninth terminal and a tenth terminal, and

the ninth terminal being coupled to the driving voltage and the tenth terminal being coupled to the first power source line.

18. (Previously Presented) An electro-optical device according to Claim 13, the electro-optical element being an EL element.

19. (Previously Presented) A method of driving an electro-optical device, the electro-optical device comprising:

a plurality of scanning lines;
a plurality of data lines;
a plurality of first power source lines; and
a plurality of unit circuits,
each of the plurality of unit circuits comprising:

a first transistor coupled in series to an electro-optical element and coupled to the corresponding first power source line of the plurality of first power source lines; a second transistor that controls an electrical connection between a drain of the first transistor and a gate of the first transistor; and a third transistor that controls an electrical connection between the first transistor and the corresponding data line of the plurality of data lines, the third transistor being controlled by a scanning signal supplied through the corresponding scanning line of the plurality of scanning lines,

the method comprising:

a first step of, when the third transistor is in an on state and the corresponding first power source line is electrically disconnected from a driving voltage, making a data current supplied from the corresponding data line flow through the first transistor to set the electrical connection state of the first transistor; and

a second step of, when the third transistor is in an off state and the driving voltage is applied to either a drain of the first transistor or a source of the first transistor through the corresponding first power source line, making a current corresponding to the electrical connection of the first transistor set by the data current flow between the corresponding first power source line and the electro-optical element.

20. (Previously Presented) A method of driving an electro-optical device having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal; a second transistor having a third terminal, a fourth terminal, and a second control terminal, the third terminal being coupled to the first control terminal, the fourth terminal being coupled to the second terminal;

a third transistor having a fifth terminal, a sixth terminal, and a third control terminal, the fifth terminal being coupled to the first terminal;

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal; and
an electro-optical element coupled to the second terminal,
the sixth terminal being coupled to one data line of a plurality of data lines,
the third control terminal being coupled to one scanning line of a plurality of scanning lines,

the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits,

the method comprising:

a step of electrically disconnecting the first terminals of a series of the unit circuits from a driving voltage by electrically disconnecting the first power source line from the driving voltage, causing a quantity of charge corresponding to the current level of a current flowing through the first transistor to be held in the capacitive element by switching the third transistor of each of the series of unit circuits to an on state, and applying a voltage corresponding to the quantity of charge to the first control terminal to set an electrical connection state between the first terminal and the second terminal; and

a step of switching the third transistor to an off state and electrically connecting the first terminal of each of the series of unit circuits to the driving voltage through the first power source line.

21. (Previously Presented) A method of driving an electro-optical device having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a first transistor having a first terminal, a second terminal, and a first control terminal;

a second transistor having a third terminal, a fourth terminal, and a second control terminal, the third terminal being coupled to the first control terminal, the fourth terminal being coupled to the second terminal;

a third transistor having a fifth terminal, a sixth terminal, and a third control terminal, the fifth terminal being coupled to the first terminal;

a capacitive element having a seventh terminal and an eighth terminal, the seventh terminal being coupled to the first control terminal and the third terminal; and
an electro-optical element coupled to the second terminal,
the sixth terminal being coupled to one data line of a plurality of data lines,
the third control terminal being coupled to one scanning line of a plurality of scanning lines,

the first terminal being coupled to a first power source line together with the first terminals of other unit circuits of the plurality of unit circuits,

the eighth terminal being coupled to a second power source line together with the eighth terminals of the other unit circuits of the plurality of unit circuits,

the method comprising:

a step of electrically disconnecting the first terminals of a series of the unit circuits from a driving voltage by electrically disconnecting the first power source line from the driving voltage, causing a quantity of charge corresponding to the current level of a current flowing through the first transistor to be held in the capacitive element by switching the third transistor of each of the series of unit circuits to an on state, and applying a voltage corresponding to the quantity of charge to the first control terminal to set an electrical connection state between the first terminal and the second terminal; and

a step of switching the third transistor to an off state and electrically connecting the first terminal of each of the series of unit circuits to the driving voltage through the first power source line.

22. (Original) An electronic apparatus equipped with the electronic circuit according to Claim 1.

23. (Original) An electronic apparatus equipped with the electro-optical device according to Claim 13.